A Learning Real-Time Routing System for Emergency Vehicles

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Résumé en anglais	This paper describes a learning routing system designed to ease the movement of emergency vehicles through a network of congested streets. Real-time capabilities of the routing system are given by the use of GPS equipment installed aboard of every emergency vehicle. The same type of equipment is used to control the state of traffic lights and to collect real-time data on the current traffic volume. The actual routing algorithm is part of the A* class and reaches decisions with the help of a neural network that estimates the expected time of arrival of every feasible route the emergency vehicles might follow. Real-time traffic data is used to train the neural network and to help the routing algorithm work faster. This not only reduces the response time but it also increases the safety of the emergency vehicles.
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